

Appl. No. 10/644,280
Amdt. dated Aug. 4, 2005
Reply to Office Action of Apr. 8, 2005

Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A cable tray for use in a cable tray system in which at least two cable trays are connected together with at least one fastener, the cable tray comprising:

a cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls being connected to longitudinal edges of the base portion and extending in a common direction perpendicular to the base portion, the base portion defining a plurality of open ends of the cable support assembly; and

a connector receiving member connected to the base portion of the cable support assembly proximate a first open end of the cable support assembly, the connector receiving member including two parallel sections separated by a space and extending transversely across at least part of a width of the base portion, the two parallel sections of the connector receiving member being arranged to at least receive at least a portion of a first fastener in the space therebetween.

Claim 2 (previously presented): The cable tray of claim 1, wherein at least one of the two parallel sections of the connector receiving member includes an insulated portion and an electrically conductive portion, and wherein the electrically conductive portion is arranged to engage the portion of the first fastener.

Claim 3 (previously presented): The cable tray of claim 1, wherein the two parallel sections of the connector receiving member include wires that are separated so as to receive and snugly engage a head of a carriage bolt such that rotation of the carriage bolt is prevented during threading of a nut onto the carriage bolt.

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Claim 4 (previously presented): The cable tray of claim 1, comprising:

a connector receiving element connected to the base portion of the cable support assembly proximate a second open end of the cable support assembly, the connector receiving element including two parallel sections separated by a space and extending longitudinally beyond the second open end of the cable support assembly, the two parallel sections of the connector receiving element being arranged to at least receive at least a portion of a second fastener therebetween.

Claim 5 (previously presented): The cable tray of claim 4, wherein the connector receiving element is positioned directly across from the connector receiving member along a length of the base portion of the cable support assembly.

Claim 6 (previously presented): The cable tray of claim 4, wherein the connector receiving element further includes a loop member interconnecting common ends of the two parallel sections of the connector receiving element, such that the connector receiving element forms a looping element that extends beyond the second open end of the cable support assembly.

Claim 7 (previously presented): The cable tray of claim 4, further comprising a second connector receiving element connected to the base portion of the cable support assembly proximate the first open end of the cable support assembly, the second connector receiving element including two parallel sections separated by a space and extending longitudinally beyond the first open end of the cable support assembly, the two parallel sections of the second connector receiving element being arranged to at least receive at least a portion of a third fastener therebetween.

Claim 8 (previously presented): The cable tray of claim 4, wherein the connector receiving element includes at least one J-shaped hook.

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Claim 9 (previously presented): The cable tray of claim 7, wherein the second connector receiving element is positioned directly across from the connector receiving member along the width of the base portion of the cable support assembly and is further positioned diagonally across from the connector receiving element along a length of the base portion of the cable support assembly.

Claim 10 (previously presented): The cable tray of claim 1, further comprising:

a connector receiving element connected to a sidewall of the cable support assembly proximate one of the first open end and a second open end of the cable support assembly, the connector receiving element including two parallel sections separated by a space and extending longitudinally beyond the first open end or the second open end of the cable support assembly, the two parallel sections of the connector receiving element being arranged to at least receive at least a portion of a second fastener therebetween.

Claim 11 (previously presented): The cable tray of claim 4, wherein at least one of the two parallel sections of the connector receiving element includes an insulated portion and an electrically conductive portion, and wherein the electrically conductive portion is arranged to engage the portion of the second fastener.

Claim 12 (previously presented): A cable tray system comprising:

a first cable tray including a first cable support assembly and a connector receiving member, the first cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls of the first cable support assembly being connected to longitudinal edges of the base portion of the first cable support assembly and extending in a common direction perpendicular to the base portion of the first cable support assembly, the base portion of the first cable support assembly defining a plurality of open ends of the first cable support assembly, the connector receiving member being connected to at least one of the base portion and a sidewall of the first cable support assembly proximate an open end of the first cable support assembly, the connector receiving member including two parallel wire sections separated by a space and

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extending transversely across at least part of a width of the base portion or the sidewall of the first cable support assembly;

a second cable tray including a second cable support assembly and a connector receiving element, the second cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls of the second cable support assembly being connected to longitudinal edges of the base portion of the second cable support assembly and extending in a common direction perpendicular to the base portion of the second cable support assembly, the base portion of the second cable support assembly defining a plurality of open ends of the second cable support assembly, the connector receiving element being connected to at least one of the base portion and a sidewall of the second cable support assembly, proximate an open end of the second cable support assembly, the connector receiving element including two parallel wire sections separated by a space and extending longitudinally beyond the open end of the second cable support assembly, wherein the space between the two parallel wire sections of the connector receiving element of the second cable tray overlaps the space between the two parallel wire sections of the connector receiving member of the first cable tray when the second cable tray is positioned adjacent the first cable tray; and

a fastener adapted to pass through the connector receiving member of the first cable tray and the connector receiving element of the second cable tray to secure the two parallel wire sections of the connector receiving element to the two parallel wire sections of the connector receiving member.

Claim 13 (previously presented): The cable tray system of claim 12, wherein at least one of the first cable support assembly and the second cable support assembly is pre-formed into a shape having at least one interior angle, wherein said shape allows for intersection of a plurality of cable trays at angles other than 180 degrees.

Claim 14 (previously presented): The cable tray system of claim 12, wherein at least one of the two parallel wire sections of the connector receiving member includes an insulated portion and an electrically conductive portion, wherein at least one of the two parallel wire sections of the connector receiving member includes an insulated portion and an electrically conductive portion,

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and wherein the electrically conductive portion of the two parallel wire sections of the connector receiving member engages the electrically conductive portion of the two parallel wire sections of the connector receiving element when the connector receiving member is secured to the connector receiving element by the fastener, thereby providing electrical continuity between the first cable tray and the second cable tray.

Claim 15 (previously presented): The cable tray system of claim 14, wherein the electrically conductive portion of the two parallel wire sections of the connector receiving member and the electrically conductive portion of the two parallel wire sections of the connector receiving element include a conductive, non-corrosive coating, and wherein the insulated portion of the two parallel wire sections of the connector receiving member and the insulated portion of the two parallel wire sections of the connector receiving element include an electrically non-conductive coating.

Claim 16 (previously presented): The cable tray system of claim 12, wherein the fastener comprises a carriage bolt and a nut and wherein the two parallel wire sections of the connector receiving member are separated so as to receive and snugly engage a head of the carriage bolt such that rotation of the carriage bolt is prevented during threading of the nut onto the carriage bolt.

Claim 17 (previously presented): The cable tray system of claim 12, wherein the fastener comprises a carriage bolt and a nut and wherein the two parallel wire sections of the connector receiving element are separated so as to receive and snugly engage a head of the carriage bolt such that rotation of the carriage bolt is prevented during threading of the nut onto the carriage bolt.

Claim 18 (previously presented): The cable tray system of claim 12, wherein the fastener is electrically conductive.

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Claim 19 (withdrawn): A method for surface treating a cable tray which comprises

- providing a cable tray;
- fixedly attaching at least one connector receiving element to the cable tray;
- providing a first mask blank to cover at least a portion of the at least one connector receiving element;
- providing a second mask blank to cover at least a portion of the cable tray at a position where the at least a portion of the cable tray that is masked by the second mask blank will be in registry with a connector receiving element on an adjacent cable tray;
- placing a surface treatment on an unmasked portion of the cable tray that will render said uncovered portion non-electrically conductive; and
- removing the mask blanks.

Claim 20 (withdrawn): The method for surface treating a cable tray of claim 19 wherein the treatment comprises painting.

Claim 21 (withdrawn): The method for surface treating a cable tray of claim 19 wherein the treatment comprises powder coating.

Claim 22 (cancelled)

Claim 23 (cancelled)

Claim 24 (currently amended): A cable tray for use in a cable tray system in which at least two cable trays are connected together with at least one fastener, the cable tray comprising:

- a cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls being connected to longitudinal edges of the base portion and extending in a common direction perpendicular to the base portion, the base portion defining a plurality of open ends of the cable support assembly; and

- a connector receiving member integrated into a sidewall of the cable support assembly proximate an open end of the cable support assembly, the connector receiving member including

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two parallel sections separated by a space and extending transversely across at least part of a width of the sidewall, the two parallel sections of the connector receiving member being arranged to at least receive at least a portion of a fastener in the space therebetween, wherein at least one of the two parallel sections of the connector receiving member includes an insulated portion and an electrically conductive portion, and wherein the electrically conductive portion is arranged to engage the portion of the fastener.

Claim 25 (cancelled)

Claim 26 (currently amended): A cable tray for use in a cable tray system in which at least two cable trays are connected together with at least one fastener, the cable tray comprising:

a cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls being connected to longitudinal edges of the base portion and extending in a common direction perpendicular to the base portion, the base portion defining a plurality of open ends of the cable support assembly; and

a connector receiving element connected to at least one of the base portion and a sidewall of the cable support assembly proximate an open end of the cable support assembly, the connector receiving element including two parallel wire sections separated by a space and extending longitudinally beyond the open end of the cable support assembly, the two parallel wire sections of the connector receiving element being arranged to at least receive at least a portion of a fastener in the space therebetween.

Claim 27 (currently amended): The cable tray of claim 26, wherein the connector receiving element further includes an arched member interconnecting common ends of the two parallel sections of the connector receiving element, such that the connector receiving element forms a looping element that extends beyond the open end of the cable support assembly, wherein the looping element [[loop member]] and at least one of the two parallel sections of the connector receiving element include respective electrically conductive portions that are arranged to engage the fastener.

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Claim 28 (previously presented): The cable tray system of claim 12, wherein the connector receiving member of the first cable tray is integrated into the base portion or the sidewall of the first cable support assembly.

Claim 29 (previously presented): A cable tray system comprising:

a first cable tray including a first cable support assembly and a connector receiving member, the first cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls of the first cable support assembly being connected to longitudinal edges of the base portion of the first cable support assembly and extending in a common direction perpendicular to the base portion of the first cable support assembly, the base portion of the first cable support assembly defining a plurality of open ends of the first cable support assembly, the connector receiving member being connected to at least one of the base portion and a sidewall of the first cable support assembly proximate an open end of the first cable support assembly, the connector receiving member including an insulated portion and an electrically conductive, contact portion, wherein the electrically conductive, contact portion of the connector receiving member defines an open space therein;

a second cable tray including a second cable support assembly and a connector receiving element, the second cable support assembly having a weight-bearing base portion and a plurality of sidewalls, the sidewalls of the second cable support assembly being connected to longitudinal edges of the base portion of the second cable support assembly and extending in a common direction perpendicular to the base portion of the second cable support assembly, the base portion of the second cable support assembly defining a plurality of open ends of the second cable support assembly, the connector receiving element being connected to at least one of the base portion and a sidewall of the second cable support assembly proximate an open end of the second cable support assembly, the connector receiving element including an insulated portion and an electrically conductive, contact portion, the electrically conductive, contact portion of the connector receiving element defining an open space therein, wherein the electrically conductive, contact portion of the connector receiving element of the second cable tray overlaps the electrically conductive, contact portion of the connector receiving member of the first cable tray when the first cable tray and the second cable tray are positioned adjacent one another; and

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a fastener adapted to pass through the open space defined by the connector receiving member of the first cable tray and the open space defined by the connector receiving element of the second cable tray to secure the electrically conductive, contact portion of the connector receiving member of the first cable tray to the electrically conductive, contact portion of the connector receiving element of the second cable tray, thereby providing electrical continuity between the first cable tray and the second cable tray.

Claim 30 (previously presented): The cable tray system of claim 29, wherein the insulated portion of the connector receiving member of the first cable tray comprises a non-conductive covering disposed upon a first conductive material and is substantially larger than the electrically conductive, contact portion of the connector receiving member, wherein the insulated portion of the connector receiving element of the second cable tray comprises a non-conductive covering disposed upon a second conductive material and is substantially larger than the electrically conductive, contact portion of the connector receiving element, and wherein the insulated portions of the connector receiving member and the connector receiving element isolate the first conductive material and the second conductive material from cables passed through the first cable tray and the second cable tray.